

**REMARKS**

Applicant thanks the Examiner for the allowance of claims 19 and 23. Claims 1-6, 9-17, and 21-22 stand rejected. The rejection of these claims is traversed, and the Examiner is respectfully requested to withdraw the rejections for the reasons discussed below.

**Prior Art-Based Rejections – Becker et al.**

Claim 21 is rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, as being obvious over United States Patent No. 4,477,955 to Becker et al. (“Becker”).

Claim 21 recites a method of making a component having the steps of providing a core and then applying a first material to the core. The first material and the core are then substantially enclosed *within* a capsule, and then a second material is introduced into the capsule such that at least some of the first material is in contact with at least some of the second material. The first and second materials are metallurgically bonded to one another, and then the capsule is removed to yield a component having a non-linear shape wherein the first material is more corrosion and/or wear resistant than the second material.

Becker discloses a method of lining a valve body with a material more corrosion resistant than the material of the valve body. The method, which is different from anything claimed by Applicant, includes placing a can within the valve body, and adding a metal powder between the valve body and can. A vacuum is drawn and the valve body is subjected to heat and pressure, which causes the metal powder to be consolidated into a solid lining that is bonded to the inner wall of the valve body. In addition, the valve body can be nickel plated prior to lining.

The Examiner argues that Becker discloses all the components and all the method steps required by claim 21. In particular, the Office Action states that the valve body 10 reads on the claimed core; the nickel plating reads on the first material; the can 16 reads on the capsule; and the powder, which forms the lining, reads on the second material.

Applicant reminds the Examiner that claim 21 requires substantially enclosing the first material within a capsule, a step not found in Becker. The term “within” as defined by *The American Heritage Dictionary of the English Language, Fourth Edition* means, “[i]n the inner part or parts of; inside.” Applying the Becker reference as proposed by the Examiner, it is clear that the Becker reference does not meet this limitation because Becker does not disclose

enclosing any first material within a capsule. The Office Action states that Becker's valve body 10 is a "core," its nickel plating is a "first material," its powder is a "second material," and its can 16 is a "capsule," yet Becker fails to disclose placing any of these material within can 16 (capsule). Instead the nickel plating (first material) and the valve body (core) are positioned outside of can 16. Thus, Becker fails to disclose a first material enclosed *within* a capsule, and since Becker's can 16 cannot equate to the claimed capsule, Becker fails to anticipate claim 21.

Although the Examiner alternatively rejects claim 21 as being obvious over Becker, Applicant submits that there is no motivation, absent Applicant's disclosure, to modify the Becker reference to mimic claim 21.

Moreover, adapting the Becker references to the limitations of claim 21 would require modifications contrary to the reference's teachings. Becker's method of lining a structure, such as a valve body, is taught for increasing the corrosion resistance of the internal metal surfaces. Can 16 is particularly adapted for insertion into the interior of the valve body and transmission of pressure to a powder positioned between the inside surface of the pipe and the can. The pressure results in a consolidated liner. To properly line the interior of the valve body, the can, the powder, and the other materials cannot be rearranged. As such, one of ordinary skill in the art could not adapted the Becker reference to claim 21 without destroying the teachings of Becker. Accordingly, the obviousness rejection of claim 21 in view of Becker cannot stand.

Section 7 of the Office Action rejects claims 1-5, 9-14, and 21-22 pursuant to 35 U.S.C. §103(a) as being obvious over Becker in view of van Nederveen et al. ("van Nederveen"). The Examiner argues that while Becker fails to disclose spray deposition, or that the nickel plating is more wear resistant than the spray deposited material, van Nederveen supplies motivation for using spray deposition and suggests that the spray deposited layer is more wear resistant. Applicant respectfully traverses this rejection.

With respect to independent claims 1 and 21, van Nederveen fails to disclose or suggest substantially enclosing the first material and/or the sacrificial core *within* a can 16. Instead, van Nederveen discloses methods for producing a drill bit having multiple layers that are unrelated to the lined pipes of Becker. Accordingly, van Nederveen fails to remedy the defects of the Becker reference and the rejection of Becker in view of van Nederveen fails to render obvious claims 1-5, 9-14, and 21-22.

**Prior Art-Based Rejections – Ritter et al.**

Section 9 of the Office Action rejects claims 1-5, 9-14, and 21-22 pursuant to 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,822,853 to Ritter et al. (“Ritter”). In particular, the rejection states, “the process forms both inner and outer walls, that may be metallurgically bonded by a HIP process, and uses 2 sets of sacrificial channel fillings i.e. corresponding to sacrificial cores. The HIP takes place in a can, which corresponds to the claimed capsule. Use of powder is explicitly suggested.” In making this rejection, the Examiner fails to point to any disclosure within Ritter particularly identifying the claimed arrangement of the components in the method steps of independent claims 1 and 21.

Simply because Ritter may contain similar components, does not in any way suggest that those components are used in the same manner or arranged in the same configuration. For example, the Ritter reference does not apply a first material onto at least a portion of the outer surface of a sacrificial core, or introduce a quantity of a second material, in a powder form, within a capsule such that at least some of the first material is in contact with at least some of the second material. The Ritter reference also fails to disclose that the first material is more corrosion and/or wear resistant than the second material.

Ritter discloses a double walled structure containing internal channels formed from two walls and spacers. The use of powder is suggested for creating part of the double walled structure. For instance, in Example 1, a HIP step consolidates the powder into about a 0.02 inch thick top wall 88 on the stainless steel channel assembly. However, Ritter fails to disclose the steps of applying a first material onto at least a portion of the outer surface of a sacrificial core, and introducing a quantity of a second material in a powder form within the capsule such that at least some of the first material is in contact with at least some of the second material. Moreover, there is no suggestion of differences in wear resistance between the materials. Accordingly, Ritter fails to anticipate independent claims 1 and 21.

Section 9 of the Office Action rejects claims 15-17 pursuant to 35 U.S.C. §103(a) as being anticipated by Ritter. The rejection states that while Ritter fails to disclose the amount of time for applying for HIP heat and pressure, it would have been obvious to one of ordinary skill to determine the times required to produce the desired results. However, as discussed above, Ritter fails to anticipate or render obvious independent claim 1, accordingly the rejection in view

of Ritter fails.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Dated: June 2, 2004

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